Providing pharmaceutical care — the views of Scottish pharmacists

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AIM • To determine the resources available to Scottish pharmacists for providing pharmaceutical care, the services currently provided and views on issues surrounding pharmaceutical care services.

DESIGN • Postal questionnaire survey, using open and closed questions, Likert scale for opinions on relevant issues and free comment.

SUBJECTS AND SETTING • Community pharmacists and practice-based pharmacists working in Scotland.

RESULTS • Response rates were 48% (290 usable) and 65% (72 usable) from community pharmacists and practice pharmacists respectively. Most community pharmacists (75%) had a dispensing technician, but only 35% had a second pharmacist. In total 40% had a consultation area/room. Many undertook Scottish Centre for Post-qualification Pharmaceutical Education courses to keep up to date, but few had higher qualifications. Few were paid for services outwith the standard contract or locally negotiated services. More practice pharmacists had access to a consultation facility, internet and medical journals and held a higher diploma/degree than community pharmacists. Most pharmacists claimed to have good relationships with GPs, but fewer community pharmacists had access to medical records than practice pharmacists. 47% of community pharmacists claimed to have long-term relationships with most of their regular patients. A substantial majority of all respondents agreed that the current remuneration structure was entirely inappropriate for providing pharmaceutical care and that if the contract were changed to provide payment for pharmaceutical care the focus for the majority of community pharmacists would change. There was also widespread agreement that pharmaceutical care should be seamless, an MSc was not a requirement, devolving tasks in the dispensary was necessary and repeat dispensing would facilitate pharmaceutical care.

CONCLUSION • Some important resources are in place which will enable community pharmacists to provide pharmaceutical care, although currently more practice pharmacists are being paid for services such as reviewing medication. The results suggest that changes to the remuneration structure and other legal issues may facilitate developments in this area.

Community pharmacists may provide many different services which can be described as pharmaceutical care. A survey in Northern Ireland published in 1997 showed that almost half of community pharmacists were attempting to provide pharmaceutical care to patients[1] but a number of potential barriers were identified among this population.[2] Similar barriers have been found elsewhere.[3,4]

In Scotland, guidelines have been published which propose a systematic approach to providing pharmaceutical care to individual patients.[5] The feasibility of using this approach has been shown by pharmacists providing care via domiciliary visits to elderly patients.[6] In interviews with 16 key pharmacists in Scotland (potential policymakers and innovative practitioners), the Clinical Research and Audit Group guideline approach to the pharmaceutical care of individual patients was agreed as being appropriate and community pharmacies as the key primary care locus for providing pharmaceutical care.[7] However, if the guideline's approach is to be implemented, there are a range of resource issues and other factors which need to be addressed, such as those found in Northern Ireland. These resources and factors were identified from the literature and from interviews, the results of which have been reported elsewhere.[8] Physical resources necessary for the delivery of pharmaceutical care were identified as staff with appropriate training, time, space, access to medical records, appropriate computer systems and accessible literature. Other important factors were the need to remunerate pharmaceutical care services, relationships with GPs, legislative issues and the attitudes of pharmacists and patients.

The developments needed for increasing the provision of pharmaceutical care and the resource implications of such developments will depend on the facilities already in place. Pharmacists' attitudes towards pharmaceutical care and important developmental issues also need to be identified. This study describes a survey which was designed to determine the extent to which the resources identified were available in Scottish community pharmacies, the services being provided and community pharmacists' views on factors relevant to the provision of pharmaceutical care. Since many pharmacists working closely with GPs within Scotland may also be providing pharmaceutical care services, the survey also included these pharmacists.

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METHOD

A questionnaire was developed listing specific activities which form part of pharmaceutical care identified from CRAG guidelines[5] as a means of identifying whether pharmacists currently carry out these activities. Information on other activities and services provided was also requested. Questions were also included on the availability of resources identified as being required to provide pharmaceutical care. The questionnaire consisted mostly of closed questions with additional spaces provided throughout for further information and comments. A total of 18 statements were developed from transcribed interviews which related to a number of factors important for providing pharmaceutical care. These were modified from the original transcripts where necessary to ensure lack of ambiguity. Respondents were asked to indicate their level of agreement with these statements using a standard Likert scale. A second questionnaire was developed with slight modifications for distribution to pharmacists working within general medical practices.

The 16 pharmacists who had been interviewed for their opinions and whose statements were used in the questionnaire were all sent copies for comment. The questionnaire was then piloted by sending

to 15 community and practice-based pharmacists. Slight changes were made as a result of the comments received and the pilot.

A list of registered pharmacy premises in Scotland was obtained from the Royal Pharmaceutical Society. Multiple pharmacy chains (12 or more branches) were identified and the revised questionnaire sent to at least 50 per cent of these. All remaining premises were stratified by health board area and questionnaires sent to 50 per cent of the pharmacies in each. The names and contact details of pharmacists working with GPs were obtained from pharmacists working at health boards. Any pharmacists who had received the community pharmacists' questionnaire were deleted from the list to avoid duplication and the questionnaire sent to all those remaining. Pre-paid envelopes were provided for return of questionnaires.

One reminder was sent to non-responders for both questionnaires. Data were analysed using EPI Info Version 6.04 and SPSS.

RESULTS

Demographics There were 613 questionnaires sent to community pharmacists and 113 to "practice pharmacists". A total of 365 questionnaires were returned, 291 from community pharmacists and 74 from practice pharmacists (48 per cent and 65 per cent response rates respectively). One community pharmacist and two practice pharmacists did not complete the questionnaire at all, so were excluded from analysis.

Of the community pharmacists, 199 (68 per cent) were employees, 80 (27 per cent) contractors and 8 (3 per cent) locums, the remainder did not specify. Of the practice pharmacists 13 (18 per cent) identified themselves as local health care co-operative pharmacists, 23 (32 per cent) practice pharmacists and 28 (39 per cent) sessional practice pharmacists. Many of the practice pharmacists worked in community pharmacies in addition to their practice-based work (49; 68 per cent).

Most (349) provided details of age group, which showed that there was a tendency for younger pharmacists to respond to both questionnaires, with 161/282 (57 per cent) community pharmacist respondents and 46/67 (69 per cent) practice pharmacists aged 40 or under. The proportion of pharmacists who had graduated in or since 1980 was slightly higher among practice pharmacists at 71 per cent compared with 61 per cent of community pharmacists. Of the community pharmacist respondents, 127 were from multiple chains (more than 12 pharmacies) and 163 from smaller independents. A total of 280 respondents provided an estimate of the number of prescriptions dispensed daily. Three had no NHS contract, 196 dispensed between 50 and 200 prescriptions, 48 dispensed 250 to 300 and 33 over 300 prescriptions.

Services provided Respondents were asked to indicate which services they provided from a list of the processes identified as being part of pharmaceutical care. Where such services were provided, respondents were asked to describe the patients for whom they provided the service. The results are shown in Table 1. Many aspects of pharmaceutical care services were directed to specific groups of patients, such as the elderly, asthmatic or diabetic patients or those on multiple therapy. In addition, many community pharmacist respondents stated that they provided specific services when needed or asked.

TABLE 1: SERVICES PROVIDED BY COMMUNITY PHARMACISTS (N = 290) AND PRACTICE PHARMACISTS (N = 72)

Service	Community pharmacists (%)	Practice pharmacists (%)	Types of patient
Blood pressure, cholesterol or other screening	*20 (7)	13 (18)	Purchasers of self-tests (2) Part of research (4)
Assessing patients' needs for advice on medicines, review of therapy or new therapy	269 (93)	63 (88)	Elderly (12) New therapy (10) Multiple therapy (9) Respiratory conditions (5) Cardiovascular (CV) disease (1)
Assessing need for advice on lifestyle or screening	†263 (91)	53 (74)	Diabetic (8) Smoker (7) CV disease (8)
Assessing need for therapy monitoring	*179 (62)	54 (75)	Patients on monitored dosage systems (MDS) (13) Elderly (7) Asthmatic (1) Mentally ill (1) Patients on warfarin (1) Confused patients (1) If problems identified (6)
Providing advice on medicines use or side effects	‡290(100)	60 (83)	New therapy (10) Elderly (7) Multiple therapy (3) Asthma/inhalers (5) Complex or changed dose (5)
Advising on lifestyle	‡269 (93)	50 (69)	CV disease (10) Smoker (4) Heartburn (2) Diabetic (2)
Undertaking review of therapy	168 (58)	50 (69)	Multiple therapy (8) Elderly (7) Patients on statins (1) Recently discharged patients (1) Generic prescribing (1) Confused patients (4)
Monitoring compliance with medicines or adverse effects	235 (81)	57 (79)	Patients on MDS (14) Elderly (7) Frequent prescription requests (6) Multiple therapy (6) If side effects reported (4)
Monitoring disease/symptom control or quality of life	191 (66)	51 (71)	Multiple therapy (6) Asthmatic (4) Diabetic (3) Elderly (2) Pain (2)
Recommending changes to therapy during dispensing or responding to symptoms	216 (74)	N/A	If necessary (15) If problems identified (15)
Recommending changes after review or monitoring of therapy	‡141 (49)	61 (85)	Multiple therapy (4) Hypertensive patients (2) Patients on proton pump inhibitors (1)
Referring patients as part of dispensing or responding to symptoms	283 (98)	N/A	If necessary (25) If problem identified (15)
Referring as part of review or monitoring of therapy	†189 (65)	59 (82)	If necessary (9) If problems identified (9)

*Significant differences between groups * $P<0.05$, † $P<0.01$, ‡ $P<0.001$, χ^2*

More community pharmacists claimed to assess patients' needs for advice on lifestyle or for screening and to provide advice on medicines and lifestyle than practice pharmacists. More practice pharmacists than community pharmacists claimed to provide screening, recommend changes to therapy or refer patients as part of review or monitoring of therapy. Among community pharmacist respondents, there were more respondents from small independent pharmacies than from large multiples who

TABLE 2: COMPARISON OF SERVICE PROVISION BETWEEN LARGE MULTIPLE/INDEPENDENT PHARMACIES AND LOW/HIGH DISPENSING VOLUME PHARMACIES

Service	Proportion of pharmacists providing services			
	Independent (n = 163)	Multiple (n = 127)	200 Rx/day (n = 199)	>200 Rx/day (n = 81)
Services outlined on questionnaire:				
Screening	*16 (10%)	4 (3%)	14 (7%)	3 (4%)
Assessing patients' needs	151 (93%)	113 (89%)	*189 (95%)	70 (86%)
Providing advice to patients	163 (100%)	127 (100%)	199 (100%)	81 (100%)
Reviewing therapy	‡111 (68%)	57 (45%)	114 (57%)	44 (54%)
Monitoring patients' progress	144 (88%)	106 (84%)	†179 (90%)	61 (75%)
Recommending changes to therapy	123 (76%)	101 (80%)	151 (76%)	63 (78%)
Referring patients to GPs	159 (98%)	124 (98%)	*197 (99%)	76 (94%)
"Pharmaceutical care" services identified by respondents:				
Any services	81 (50%)	52 (41%)	87 (44%)	37 (46%)
Filling compliance aids/MDS	*33 (20%)	14 (11%)	33 (17%)	14 (17%)
Collection/delivery services	‡34 (21%)	4 (3%)	31 (16%)	6 (7%)
Working with GPs	8 (5%)	3 (2%)	6 (3%)	3 (4%)
Medication review	†6 (4%)	0	2 (1%)	3 (4%)
Palliative care services	2 (1%)	1 (1%)	1 (1%)	1 (1%)

*Significant difference between groups, *P<0.05, †P<0.01, ‡ P<0.001,* c^2

TABLE 3: COMPARISON OF FACILITIES/RESOURCES BETWEEN LARGE MULTIPLE/INDEPENDENT PHARMACIES AND LOW/HIGH DISPENSING VOLUME PHARMACIES

Facility/resource	Proportion of pharmacies having facility/resource			
	Independent (n = 163)	Multiple (n = 127)	200 Rx/day (n = 199)	>200 Rx/day (n = 81)
Second pharmacist (full time)	†17 (10%)	25 (20%)	‡11 (6%)	25 (31%)
Second pharmacist (part time)	30 (18%)	28 (22%)	33 (17%)	21 (26%)
Dispensing technician (full time)	99 (61%)	74 (58%)	‡93 (47%)	74 (91%)
Dispensing technician (part time)	19 (12%)	25 (20%)	†38 (19%)	13 (16%)
Consultation room	†27 (17%)	7 (6%)	19 (10%)	13 (16%)
Consultation area	*54 (33%)	28 (22%)	88 (44%)	34 (42%)
Internet access	‡74 (45%)	2 (2%)	†64 (32%)	12 (15%)

*Significant difference between groups: * P<0.05, † P<0.01, ‡ P<0.001,* c^2*; df = 1*

claimed to provide review services, screening services, filling monitored dosage systems (MDS) and collection/delivery services (Table 2). More respondents from pharmacies which dispensed 200 or fewer prescriptions daily claimed to assess patients' needs, monitor their progress and refer them to GPs than from those with higher dispensing loads (Table 2).

In response to a question designed to elicit information on the provision of non-standard services which contribute to pharmaceutical care, 132 community pharmacists (45 per cent) stated they provided such services. Many of those cited were services for which payment is provided in negotiation with local health boards, such as advice to nursing and residential homes, supervised methadone and needle exchange. Others commonly cited are shown in Table 2. The most frequently cited non-standard pharmaceutical care services for which payment was received were supply of MDS (13), advice to GPs/LHCCs (8), therapy review (4), involvement in a palliative care network (3) and screening services (2).

Six practice pharmacists also cited filling of MDS and a further 12 advice to GPs as "pharmaceutical care" services. However the most frequent service identified by the practice pharmacists was review of therapy by 30 (42 per cent). Many more practice pharmacists were receiving payment for "pharmaceutical care" services than community pharmacists. In total 23 were being remunerated for some kind of therapy review plus six for work associated with specific projects and 10 for advice to GPs.

Facilities available The availability of pharmacists and technical support was studied in order to identify whether there may be opportunities to release time to provide pharmaceutical care. There were 173 community pharmacist respondents (60 per cent) who stated they had full-time dispensing technicians, plus 44 (15 per cent) with part-time technician availability. Only 66 (22 per cent) stated they had no technician.

On the other hand 39 described combinations of full and part-time assistance, extending to more than one full time equivalent. Fewer had access to a second pharmacist, only 42 (15 per cent) having two full-time pharmacists in their pharmacy. Fifty-eight (20 per cent) had a second pharmacist part-time, but 181 (62 per cent) stated they never had a second pharmacist. Most pharmacies with high dispensing loads had a full-time technician and more had a full-time second pharmacist than less busy pharmacies (Table 3).

More respondents from large multiple pharmacy chains stated they had a full-time second pharmacist than those from independent or small multiples.

In total 115 (40 per cent) community pharmacist respondents said they had access to a consultation facility which was either a quiet area (81), some with table and seating, or a separate room (34). Some (42) described other facilities, such as part of the dispensary or a quiet end of shop counter, while 62 said they had no such facilities. The remainder did not respond to this question. There were significantly more respondents from multiples (45/99; 45 per cent) who stated they had no facilities than there were from independents (17/121; 14 per cent; $c^2 = 28.2$; $P<0.001$) and more small independents had separate rooms than respondents from multiples (Table 3). Many practice pharmacists had access to separate rooms (43; 60 per cent), mostly in the GP surgeries where they worked, with only 8 (11 per cent) stating they had no access to a consultation facility.

A wide range of textbooks and journals of potential use in providing pharmaceutical care were available to community pharmacists. The most frequently mentioned were Martindale (192) and the British National Formulary (147), with 47 stating they had all texts required for preregistration training. Few pharmacists in either group mentioned publications specifically designed to provide impartial information on drug therapy, such as *Drug and Therapeutics Bulletin* (10), *MeReC Bulletin* (2) and *SMRC Bulletin* (2). Similar numbers of community pharmacists and practice pharmacists mentioned clinical pharmacy books (15 and 16, respectively). Many practice pharmacists cited medical journals which were available to them in medical practices, such as *BMJ* (21), *Prescriber* (10) and *The Lancet* (10).

A total of 51 practice pharmacists (70.8 per cent) stated they had access to the internet for work, 20 via a computer at a medical practice, 21 via another computer and 10 through both. Only 12 said they did not use a computer and nine did not respond. Among community pharmacists, only 76 (25.7 per cent) said they had internet access, almost all of these (74) were respondents from independent or small multiple pharmacies. A substantial proportion of those who were able to access the internet could do so via their labelling computer (51; 67 per cent).

Knowledge and the need for training are important in providing pharmaceutical care.[5,8] Only 21 community pharmacists (7 per cent) claimed to have or be studying for a higher qualification, including 10 who listed a diploma/MSc in clinical pharmacy and two other higher degrees, whereas 28 (39 per cent) of the practice pharmacists claimed to have such a qualification, 19 of whom cited a diploma/MSc in clinical pharmacy.

Many respondents in both groups cited alternative methods of continuing educa-

tion which they used. Scottish Centre for Post-qualification Pharmaceutical Education courses were attended regularly by 74 community pharmacists and 41 practice pharmacists, with a further 164 community pharmacists and 27 practice pharmacists attending occasionally. Many others (178) cited reading, SCPPE distance learning packages, health board courses and completion of College of Pharmacy Practice-accredited educational material.

Documenting pharmaceutical care Documenting pharmaceutical care activities is fundamental to the practice.[5] Community pharmacies currently have computerised patient medication record (PMR) systems which can be used in documenting pharmaceutical care activities. Many community pharmacist respondents indicated that their systems could accommodate further data in addition to products dispensed (Table 4). A number indicated that they add data to PMRs, mainly on medical conditions (Table 4). Few stated their systems were able to accommodate information about patients' symptom control, which is important for monitoring progress within pharmaceutical care. A small number of community pharmacists (21; 8 per cent) said they used other recording methods, such as paper-based systems. Most (53; 74 per cent) of the practice pharmacists claimed to maintain patient profiles, on which all said they documented patients' problems and advice given to GPs. Most of these also claimed to document advice given to patients (48) and adverse effects of medicines (49). Fewer however maintained records of disease progress (20). Approximately three-quarters of the practice pharmacists who recorded information about patients retained this information in the medical records or elsewhere within the practice. The remainder kept records at home or elsewhere.

TABLE 4: COMMUNITY PHARMACISTS' USE OF PMRS (N = 290)

Type of information	Possible	Do not use	Use for all	Use for some	Type of patient used for
Medical conditions	245	26	69	147	Diabetic (26) Asthmatic (13) With allergies (7) Hypertensive (5) With thyroid conditions (5) Epileptic (3)
Purchased medicines	143	94	31	71	Purchaser of drugs of abuse (4)
Problems identified	184	41	58	96	With allergies (7) With special needs (eg non-CRCs) (6)
Advice given	100	93	20	8	No specific group
Symptom control	69	104	20	36	Asthmatic (1)
Adverse effects	203	36	80	76	With allergies (6) Any when ADR identified (4)

TABLE 5: ESTIMATED ACCESS TO MEDICAL RECORDS BY COMMUNITY PHARMACISTS AND PRACTICE PHARMACISTS

Data	Not available	Available on specific request	Available for selected groups	Fully accessible	Number responding
Community pharmacists					
Full records	185	72	8	16	281
Prescribing records	93	139	4	48	284
Medical conditions	127	137	6	13	283
Results of screening/ monitoring	182	83	5	11	281
Practice pharmacists					
Full records	6	6	5	54	71
Prescribing records	1	9	4	57	71
Medical conditions	7	9	4	51	71
Results of screening/ monitoring	6	7	5	53	71

Relationships with GPs Good relationships with GPs are important for providing pharmaceutical care and to enable pharmacists to obtain relevant information concerning patients' medical conditions, indications for therapy and progress. Over half the community pharmacists indicated that relationships with GPs were "very good" (91; 31 per cent) or "good" (104; 35 per cent). Only 17 said they were "poor" and 77 "fair". Most practice pharmacists also claimed to have "very good" (30) or "good" (34) relationships, with none stating that relationships were "poor". There were significant differences in the proportions of pharmacists in the two groups who claimed to have regular discussions with GPs (71 per cent of practice pharmacists and 36 per cent of community pharmacists; $c^2 = 22.8$, $P<0.0001$) or to discuss individual patients' therapy with GPs (51 per cent compared with 15 per cent; $c^2 = 43.5$, $P<0.0001$). Similar proportions said they provided information to GPs (65 per cent of practice pharmacists and 57 per cent of community pharmacists). Among the community pharmacists, however, there were also significant differences in the proportions working for multiples or independents who claimed to have good or very good relationships with GPs (51 per cent from multiples compared to 81 per cent from independents; $c^2 = 15.7$, $P<0.0001$, df = 3). A higher proportion of respondents from independents also claimed to have regular discussions (44 per cent compared with 27 per cent; $c^2 = 9.5$, $P<0.01$, df = 1) and to discuss individual patients with GPs (19 per cent compared with 10 per cent; $c^2 = 4.1$, $P<0.05$, df = 1).

There were also highly significant differences between pharmacists from multiples and those from independents in their access to medical records, with 76 per cent of those from multiples claiming to have no access to full records, compared with 54 per cent of those from independents ($c^2 = 11.5$, $P<0.01$, df = 1). Practice pharmacists were much more likely to have access to records than community pharmacists (Table 5) ($c^2 = 35.7$, $P<0.0001$; df = 2).

Relationships with patients Pharmaceutical care involves a long-term "covenantal" relationship with patients, which suggests that using the same pharmacy may be important. Almost half the community pharmacist respondents (131; 47 per cent) indicated that more than three-quarters of patients on long-term medication always used their pharmacy. Many respondents (202; 71 per cent) also believed that they had long-term professional relationships with over half the patients who use their pharmacies regularly. Practice pharmacists were asked whether they had a long-term professional relationship with patients for whom they provided services directly. Only 20 of the 61 who responded to this question (33 per cent) said they had such a relationship with at least half these patients. And 13 out of the 62 who responded to a further question on the proportion of patients for whom they discussed patients' therapy with a community pharmacist said none, while a further 38 estimated this to be less than 25 per cent. Only four claimed to do so for at least half the patients they dealt with, although one respondent indicated they were also the only community pharmacist in the locality.

Attitudes to providing pharmaceutical care The proportions of community pharmacists and practice pharmacists who agreed with the statements on issues relating to pharmaceutical care are compared in Table 6. Additional comments on the issues raised were made by 55 respondents, some of which are used to illustrate the results further.

The strongest overall agreement was with the statement "Pharmaceutical care is not something that you can only do once you've got an MSc in clinical pharmacy" with 90 per cent of respondents who gave an opinion agreeing or strongly agreeing. There was also strong agreement with the statements "Pharmaceutical care should be

TABLE 6: PHARMACISTS' ATTITUDES TO PROVIDING PHARMACEUTICAL CARE

Statement	Practice pharmacists		Community pharmacist	
	Number (%) who strongly agree/ agree	Number of respondents	Number (%) who strongly agree/ agree	Number of respondents
If someone wants to have pharmaceutical care they have to go to the same pharmacy for all medication needs	51 (72)	71	201 (70)	289
I don't think community pharmacists can provide pharmaceutical care without patient registration	32 (46)	70	128 (44)	289
Most patients come back to the same pharmacy, so you already have patient registration	35 (50)	70	155 (54)	287
Pharmacists are already paid for dispensing which has pharmaceutical care issues associated with it, including counselling and advice*	30 (43)	70	69 (24)	285
The current remuneration structure is entirely inappropriate for providing pharmaceutical care	55 (79)	70	229 (80)	285
If the community pharmacists' contract was changed in such a way that there was extra payment for providing pharmaceutical care, the focus for the majority of community pharmacists would change	52 (73)	71	231 (81)	285
There's no real incentive for community pharmacists to look at someone on seven or eight medicines and reduce it to four	54 (76)	71	233 (81)	287
The pharmacist is equipped and competent to maintain a patient's treatment plan	45 (67)	67	199 (69)	288
Repeat dispensing systems are a vehicle by which pharmaceutical care can be provided	54 (79)	68	239 (84)	286
Pharmaceutical care is not something that you can only do once you've got an MSc in clinical pharmacy	68 (96)	71	255 (89)	287
I think there has to be some sort of certification, approval, accreditation for providers of pharmaceutical care*	51 (72)	71	149 (52)	289
To take on any more pharmaceutical care roles community pharmacists would need to devolve tasks within the dispensary	63 (90)	70	245 (86)	286
I think we need national accreditation for dispensing technicians*	54 (76)	71	180 (62)	289
Dispensing is such that you need input into it all the time from a pharmacist*	19 (27)	70	136 (47)	287
I don't think you can get the protected time you need in a community pharmacy to provide pharmaceutical care	40 (56)	71	185 (65)	286
Community pharmacists can't deliver pharmaceutical care until they have a second pharmacist	24 (34)	71	120 (42)	284
The practice pharmacist is less accessible than the community pharmacist for ongoing pharmaceutical care	36 (51)	71	167 (58)	289
Pharmaceutical care should be seamless, whether in hospital, doctor's surgery or community pharmacy	65 (93)	70	253 (89)	283

** Statistically significant difference between attitudes of community pharmacists and practice pharmacists $P<0.05$, χ^2*

seamless, whether in hospital, doctor's surgery or community pharmacy" (90 per cent agree/strongly agree) "To take on any more pharmaceutical care roles, community pharmacists would need to devolve tasks within the dispensary" (87 per cent) with more employees/locums (90 per cent) agreeing than contractors (76 per cent) and "Repeat dispensing systems are a vehicle by which pharmaceutical care can be provided" (83 per cent).

Similar proportions of community pharmacists (80 per cent) and practice pharmacists (79 per cent) agreed with the statement "The current remuneration structure is entirely inappropriate for providing pharmaceutical care". One employee community pharmacist commented further:

"*At present, the remuneration package for community pharmacy does nothing to encourage development of pharmaceutical care in the community setting, which is unfortunate, as I feel we are in an ideal position to identify potential problems and therefore preventative measures to stop them occurring.*"

Just over half of all respondents (53 per cent) disagreed with the statement that "Pharmacists are already paid for dispensing which has pharmaceutical care issues associated with it, including counselling and advice" and a further 20 per cent were uncertain. Significantly fewer community pharmacists agreed with this statement but among these, significantly more contractors (32 per cent) agreed than employees/locums (22 per cent). Several comments illustrate this:

"*Dispensing fee is not enough to cover pharmacist's time for proper pharmaceutical care.*" *(Employee community pharmacist)*

"*Pharmacy is paid to provide pharmaceutical advice connected to dispensary and OTC sales. The role for further advice giving is unpaid.*" *(Employee community pharmacist)*

"*Elements of care here already, but certainly not currently funded to allow for degree of care most of us would wish to offer.*" *(Pharmacist contractor)*

There were 79 per cent of all respondents, with no differences between subgroups, who agreed or strongly agreed that "If the community pharmacists' contract was changed in such a way that there was extra payment for providing pharmaceutical care, the focus for the majority of community pharmacists would change". One employee community pharmacist commented that:

"*Remuneration would encourage more pharmacists to get actively involved in pharmaceutical care issues.*"

A similar proportion (80 per cent), agreed that "There's no real incentive for community pharmacists to look at someone on seven or eight medicines and reduce it to four."

And one contractor pharmacist, who claimed to have given this statement considerable thought, commented:

"*While pharmacists are paid for what they do there is no real incentive to reduce medication.*"

Options for developing pharmaceutical care could include the use of dispensing technicians, a second pharmacist or more practice pharmacists.

A higher proportion of community pharmacists than practice pharmacists agreed that dispensing required pharmacist input all the time (Table 6), although 35 per cent of all respondents disagreed with this statement.

Three employee community pharmacist respondents expressed concerns about the delegation of dispensing to technicians by:

"I feel a pharmacist must have input into dispensing at all times no matter what qualifications dispensing technicians have and so to be able to offer pharmaceutical care there would need to be provision for a second pharmacist"

"I worry about leaving ordinary dispensing to technicians."

Despite these comments, more practice pharmacists than community pharmacists agreed on the need for national accreditation for dispensing technicians. Among community pharmacists a higher proportion of employees/locums (67 per cent) than contractors (46 per cent) agreed that such national accreditation was required ($c^2 = 7.9$, $P<0.005$; df = 1).

There was no consensus on whether a second pharmacist was required before community pharmacists could provide pharmaceutical care, with 41 per cent agreeing on the need, 30 per cent disagreeing and 29 per cent uncertain. This is reflected in some of the additional comments:

"A minimum of two pharmacists per community pharmacy would overcome many of the barriers for pharmacists related to time and accessibility." (Employee community pharmacist)

"Not can't, however would be more possible if second pharmacist present." (Sessional practice pharmacist)

Although there were no differences in the proportions of community pharmacists and practice pharmacists who agreed that practice pharmacists were less accessible than community pharmacists for ongoing pharmaceutical care, some comments do illustrate that respondents have concerns about their potential limitations:

"The priority should be empowering community pharmacists as a whole and not constraining the scope of community pharmacists by moving too far towards practice pharmacist model. I believe practice pharmacists should be the exception since this model is less flexible and may further isolate community pharmacists." (Employee community pharmacist)

"Practice pharmacist isn't less accessible — just that patients probably not aware that there is a practice pharmacist. Also time can be somewhat limited if you only spend one or two sessions per week within a particular practice. I think community pharmacists are ideally placed to become involved in pharmaceutical care — they get to know their patients much better and are more aware of other problems they have, than a practice pharmacist would. We really need to find some way of helping to integrate them into LHCCs, etc." (LHCC pharmacist, not working in community pharmacy.)

Opinion among both groups was divided over whether patient registration was required: 45 per cent of all respondents agreed, 36 per cent disagreed and almost 20 per cent were uncertain whether it was necessary. There were no differences between sub-groups. One comment from a sessional practice pharmacist provides some explanation for the range of opinion:

"Too black and white. I think the patient would receive better pharmaceutical care going to the same pharmacy but not necessarily no pharmaceutical care [if they did not]."

DISCUSSION

The results of this Scotland-wide questionnaire suggest that in a proportion of pharmacies, many of the resources identified as being required for pharmaceutical care are available.

Respondents indicated there is widespread technical assistance in almost 75 per cent of pharmacies, but additional pharmacists in only 35 per cent. A large majority (87 per cent) agreed that community pharmacists would need to devolve tasks within the dispensary to take on more pharmaceutical care roles, but fewer felt that a second pharmacist was necessary (41 per cent agreed, but 30 per cent disagreed). More than half (65 per cent) agreed that a national accreditation system was needed for technicians and that they could not get the protected time needed to provide pharmaceutical care in a community pharmacy (63 per cent). Lack of time has been identified previously as a major barrier to providing pharmaceutical care in the UK.[9,10] Delegation of dispensing to technical staff occurs within the UK hospital sector[11] and training courses have been developed to meet their changed educational needs.[12]

Over one third of the community pharmacist respondents stated they had a quiet area or separate room which could be used for consultations with patients and over half had access to some information on patients' medical conditions from GPs on request. Patients agree on the need for privacy in community pharmacies,[13] although a quiet area may be preferable to a closed room.[8] The opportunity for patients to consult pharmacists in relative privacy has also been highlighted to GPs.[14] Almost 70 per cent of community pharmacists claimed to have good relationships with local GPs and to have long-term relationships with more than half the patients who use their pharmacy regularly, both of which are necessary for the delivery of pharmaceutical care. Although access to medical records is currently limited among community pharmacists, this will not develop without good relationships with the custodians of those records. The existence of good relationships already in place is therefore beneficial.

Over 70 per cent of pharmacists agreed that patients have to use the same pharmacy for all medication needs to receive pharmaceutical care, but there was an almost equal division of opinion as to whether patient registration was required. It has been estimated that up to 80 per cent of patients, particularly the elderly, do use the same pharmacy on a regular basis for receiving their repeat prescriptions.[15] The development of repeat dispensing systems may be more valuable, as this was strongly agreed to be a vehicle for providing pharmaceutical care. Research has shown that such a system has the capacity to reduce medicine overuse and identify drug-related problems,[16,17] as well as being preferred by many patients.[18] Further enhancement of the relationships between community pharmacists and GPs may be another benefit of such systems.

The questionnaire was not designed to assess pharmacists' knowledge, however it did elicit information on the methods used for keeping up to date and material available. The majority of pharmacist respondents regularly or occasionally attend SCPPE continuing education courses and use other forms of CPD. Many have useful material available to them on the premises. The majority (88 per cent) also agreed that an MSc was not necessary for providing pharmaceutical care and that pharmacists were equipped and competent to maintain a patient's treatment plan (69 per cent). Half supported the statement that some form of accreditation for providers of pharmaceutical care was needed. Recently a new short course has been offered in the UK with government support for community pharmacists who are keen to develop pharmaceutical care services.[19] This could contribute to a national accreditation system.

The stages of pharmaceutical care described in the CRAG guideline document, "Clinical pharmacy practice in primary care", are assessing needs, implementing a care plan and monitoring progress. Most respondents claimed to assess patients' needs for advice on medicines and lifestyle, particularly community pharmacists. Fewer claimed to assess need for new therapy, review and monitoring, and very few assessed need for screening. Some stated they provided these services if asked or if it was required, suggesting that the extent to which systematic needs assessment is carried out is minimal. Considerable numbers of both community pharmacists and practice pharmacists claimed to be undertaking medication reviews, which is an important part of pharmaceutical care provision. These included prescription-only reviews (defined as review using prescription records only, with or without the patient), brown bag reviews (review with the patient of actual medicines being used) and full medication reviews (review with the patient using prescription records and medical records). Previous work has shown that around half of all problems can be identified from prescription review only, patient interview is required for a further 30 per cent, but the remainder are only identified from medical records.[7] Access to medical records is therefore an important consideration if community pharmacists are to undertake a full pharmaceutical care service.

The actions necessary to implement pharmaceutical care plans include provision of information to patients, referral to GPs and monitoring of progress. Although almost all community pharmacist respon-

dents claimed to provide advice on medicines use, adverse effects and lifestyle to some or all patients, this was not the case for all practice pharmacists, who presumably have differing roles. Almost all community pharmacists claimed to refer patients to GPs as part of responding to symptoms or dispensing, although fewer recommended therapy changes. Practice pharmacists were more likely to refer patients and recommend changes as part of reviewing therapy or after monitoring therapy. Eighty per cent claimed to monitor some patients with respect to compliance and adverse effects and many said they monitored some patients' diseases, symptoms and quality of life. No information was obtained on the methods used for this monitoring, but it is possible that most pharmacists were asking simple questions of patients, rather than using standard outcome measures.

Poor documentation of pharmaceutical activities has been acknowledged, yet is considered an essential part of pharmaceutical care provision.[5] Although most community pharmacist respondents indicated that their PMR systems were capable of incorporating medical conditions, adverse effects and other problems, systems are used selectively for these purposes. Systems are less able to incorporate information on purchased medicines, advice given and symptom control. However few pharmacists were recording disease or symptom progress even in paper-based systems, such as those used by practice pharmacists. The extent to which PMRs are used has not increased compared with previous surveys.[20] Although it is feasible to use paper-based systems to document patient details and pharmacists' activities,[6] the development of a computerised system is essential to reduce the time taken to document pharmaceutical care.

It has been suggested that the attitudes of community pharmacists need to change if pharmaceutical care was to develop and that changes to the remuneration structure would be an important factor in changing attitudes.[8] The results presented here clearly corroborate the need for remuneration changes and almost 80 per cent of respondents agreed that if the contract was changed to provide extra payment for pharmaceutical care the focus for the majority of community pharmacists would change. There was a high level of agreement that the current remuneration structure is entirely inappropriate for providing pharmaceutical care and that there is no incentive for pharmacists to reduce the number of prescribed medicines patients receive. The survey also found that practice pharmacists are being paid for providing services such as therapy review more often than community pharmacists and that few community pharmacist respondents were in receipt of payment for services such as filling compliance aids.

One area of potential difficulty in progressing change is the lack of agreement on the issue of whether pharmacists are already paid for counselling and advice. However, both the Royal Pharmaceutical Society[21] and the Government[22] have recognised the need for changes to the pharmacy contract and the need to consider new approaches to remuneration to encourage the development of pharmacy services.

In Scotland, some progress has already been made with the introduction of model schemes, which are to be extended beyond palliative care, older people and people with mental ill health to patients with chronic conditions.[23] The results of our survey suggest that these and other changes are likely to be important if pharmaceutical care is to be further developed in Scotland.

Improvements to the provision of repeat medication, electronic transmission of prescriptions and better information exchange, pharmacists conducting medication reviews and monitoring certain treatments are all mentioned in the Scottish Health Plan.[23] If community pharmacists are to develop such services, development will also be required in computer systems, pharmacy layout, training and legal issues. Although there are clearly areas of agreement concerning some of the factors requiring change, our survey has not determined the extent to which there is enthusiasm for such change.

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